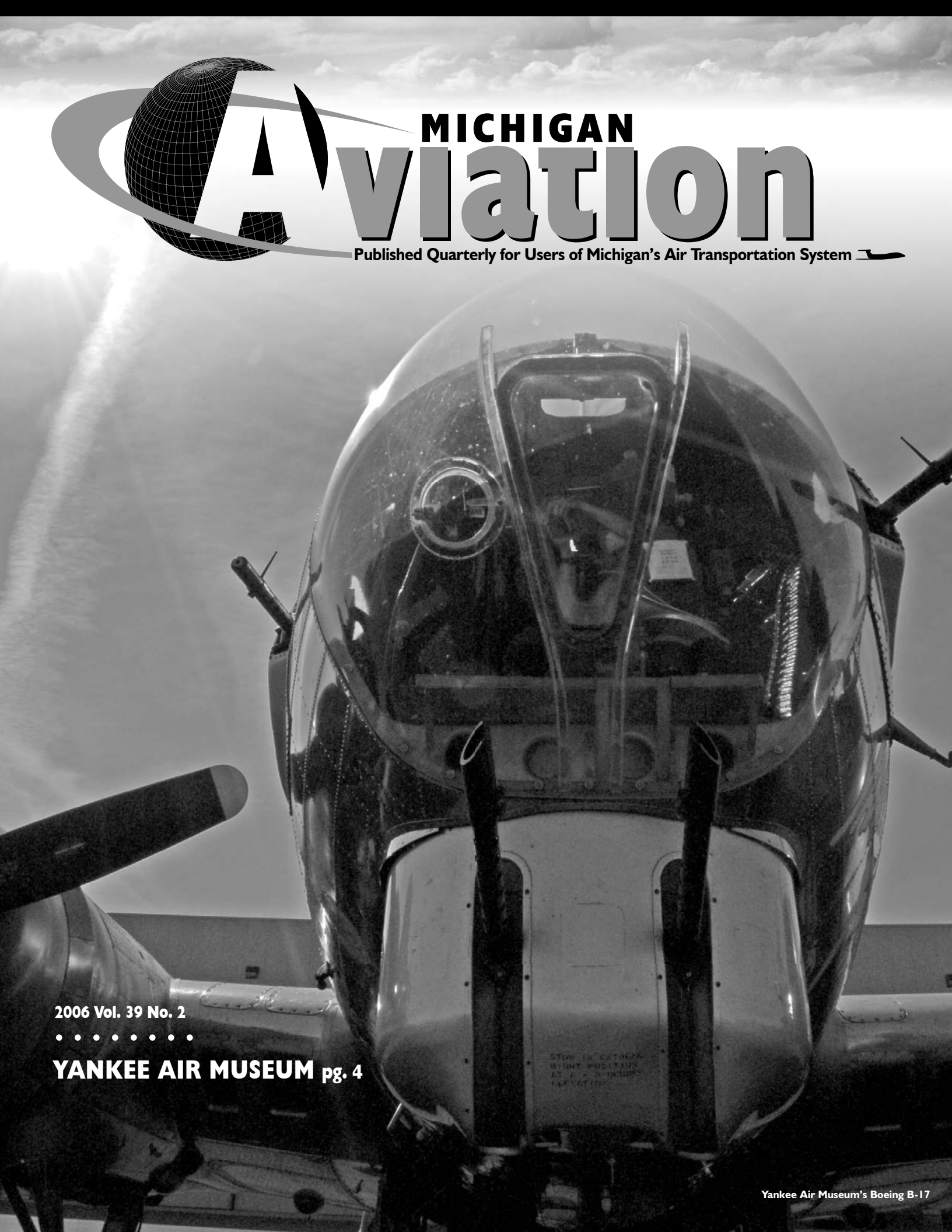

MICHIGAN Aviation

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YANKEE AIR MUSEUM pg. 4

Yankee Air Museum's Boeing B-17

DIRECTOR'S DESK

Rob Abent, Director
Michigan Aeronautics Commission

First some exciting organization news! As most readers are aware, the Multi-Modal Transportation Services Bureau was created in 2002 by merging the former bureaus of Aeronautics and Urban and Public Transportation (UPTRAN) into one administrative unit, with an eye toward combining and elevating the MDOT's multi-modal activities. However, this merger resulted in myriad issues. After much considered discussion with our partners and stakeholders, MDOT leadership determined that all can be better served by going to a new organization.

On July 14, 2006, the former Multi-Modal bureau was divided into two separate bureaus, each with its own director. I was honored to be asked to act as director for the new Bureau of Aeronautics and Freight Services (BAFS). I will also continue as Director of the Michigan Aeronautics Commission. Concurrent with this reorganization I am pleased to announce that I have appointed Rick Hammond as administrator of the bureau's Airports Division. He will also serve as my primary advisor on aviation issues. Rick has extensive experience in the aviation industry as a pilot, regulatory expert, legislative liaison, and manager.

This reorganization will allow us to intensify our focus on the substantial issues and challenges facing aviation in Michigan. We are confident that this change will benefit both staff and customers. I would like to personally thank all the individuals and groups who contributed to the organization discussion, including members of the Michigan Aeronautics Commission, Michigan Association of Airport Executives, Aircraft Owners and Pilots Association, and many others. In particular, I would like to thank Commission Chairman, Terry Everman, who helped guide this decision-making process in a productive fashion.

ROUND TABLE MEETINGS

On August 11, 2006 the Michigan Aeronautics Commission hosted what is hoped to be the first of several Round Table meetings with airport managers. These informal meetings are being held to foster communication between the commission and airport managers from across the state.

Understandably, among the most important issues managers address on a continuing basis is that of funding. Bureau staff briefed them on the status of federal and state funds for the coming year.

The operating budget for the Michigan Department of Transportation for the fiscal year beginning October 1, 2006 includes a nine percent reduction from the current year; therefore it will be necessary to cut costs in some of our programs. The largest portion of aeronautics' revenue comes from the tax on aviation fuel, which is down approximately 12 percent from last year.

The Air Service Program, which helps communities attract and market local air service, has been traditionally funded at $1 million annually. This year it will receive $700,000 and further reductions may be necessary as the year progresses.

The All Weather Access Program includes the installation and maintenance of Automated Weather Observing Systems (AWOS) and weather briefing computers. The maintenance of existing systems will continue; however, new installations must be funded by individual airports through the Capital Outlay program.

Airport managers at the recent Round Table meeting. (Left to right) Lee Scherwitz, Southwest Michigan Regional Airport; John Strehl, Antrim County Airport; and Mark Johnson, Livingston County Airport.

The federal Airport Improvement Program (AIP) has been approved by the Senate Appropriations Committee at $3.52 billion. The budget appropriates $10 million for the Small Community Air Service Development Program, however, there are currently no Michigan airports slated to receive this funding. A continuing priority is the FAA requirement that airports bring all runway ends into compliance with federal runway safety area standards by 2015.

Other areas of discussion at the roundtable included the bid process by which airports can acquire equipment and supplies, intrastate airline service, security concerns, and the effects that "Very Light Jet" aircraft will have on our air transportation system.

(Left to right) P-51 pilot, Jack Roush and MAC Chair, Terry Everman.

YANKEE AIR MUSEUM

At the May 24 meeting of the Michigan Aeronautics Commission we were very proud to host a special visit by the Yankee Air Museum and Michigan Aerospace Foundation. Dennis Norton, Frank Sinagra, Dick Stewart, and Gayle Roberts made a very powerful presentation to commissioners regarding the museum's history and future since the devastating 2004 fire which destroyed the museum. The visit was especially memorable because museum staff arrived for the meeting in their B-17 and P-51 vintage aircraft.

Thanks to efforts of museum staff visitors to the aeronautics building in Lansing will now enjoy a new display outlining the Yankee Air Museum and Michigan Aerospace Foundation. **For the full story of the Yankee Air Museum, please see page 4 of this issue.**

INSTRUCTOR'S CORNER

By Tom Krashen

INSTRUMENT DEPARTURE PROCEDURES AND TAKEOFF MINIMUMS

Much is made of the necessity for pilots to be knowledgeable and proficient with instrument approach procedures. Understanding the intricacies of approach procedures is key to insuring that pilots avoid obstacles during arrivals.

Obviously, the same obstacles that dictate approach procedure design are also present upon departure. However, most pilots will agree that during training less emphasis is placed on departure procedures than on approaches.

PROCEDURE NOMANCLATURE

In December 2000, the FAA changed the nomenclature of departure procedures. Rather than use two separate formats for IFR departure procedures and standard instrument departure procedures (SIDs), all departure procedures were called DPs. As one might expect, that change created a bit of confusion since many foreign countries still use the term "SID." The current convention used by FAA is to name departure procedures either ODPs (obstacle departure procedures) or SIDs (standard instrument departure procedures) depending on their purpose.

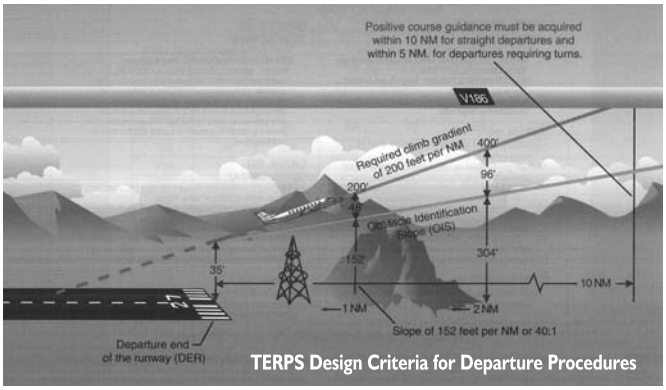
STANDARD INSTRUMENT DEPARTURES

A SID is a departure route designed at the request of Air Traffic Control to increase the capacity of terminal airspace and control the flow of traffic with minimal communications. While obstacle protection is always considered in SID design, the primary goal is to reduce pilot and controller workload and to provide a seamless transition to the en route structure.

OBSTACLE DEPARTURE PROCEDURES

It is not an exaggeration to say that obstacle departure procedures are every bit as important for pilots to understand and follow as are approach procedures. ODPs are designed simply to provide obstacle clearance following takeoff. They do not include any air traffic control climb requirements. ODPs are usually published in text format, but may include a graphic depiction if necessary. If this is the case, the ODP will be published exactly as if it were a SID except that the word "Obstacle" appears in parentheses in the procedure title.

Pilots are responsible for determining if an ODP exists and for complying with it. ATC clearance is not needed to use an ODP. On U.S Government charts, ODPs are published near the front of the approach chart book, under the heading "Takeoff Minimums and Obstacle Departure Procedures." The T symbol alerts pilots to the presence of non-standard takeoff minimums or departure procedures on government charts. Jeppesen publishes the same information on the airport diagram page for each airport in the lower left corner.



TERPS Design Criteria for Departure Procedures

DEPARTURE PROCEDURE DESIGN

At airports with published instrument approach procedures, the designers of the procedure conduct an analysis of obstacles which could interfere with departures. **At airports without approaches, no such analysis is performed and pilots are entirely on their own to identify obstacles and determine the performance necessary to avoid them.**

If no obstacle penetrates a 40:1 (for each forty feet traveled horizontally, one foot vertically is gained) "obstacle identification surface" for a particular runway, it complies with what is known as a "diverse departure," and no obstacle departure procedure will be published. This means that on departure a pilot can expect to turn in any direction and remain clear of obstructions, providing certain specific conditions are met.

THE CONDITIONS

In order to insure that obstacles in the 40:1 obstacle identification surface are cleared, a climb gradient of at least 152 feet per nautical mile is required. (Aircraft performance of at least 200 feet per nautical mile is assumed, however, insuring a 48 foot buffer.) Additionally, it is assumed that all aircraft will follow the following takeoff and climb profile. After liftoff, cross the departure end of the runway at least 35 feet above the ground, climb straight ahead to at least 400 feet above ground level, and continue the climb to an appropriate en route altitude at the previously mentioned 200 feet per nautical mile.

Since aircraft do not have a "feet-per-mile-gauge," pilots must convert the required climb gradient to "feet per minute" (for which we do have a gauge). To convert the climb gradient to climb rate in hundreds of feet, divide your ground speed by 60 and multiply by the required climb gradient. (Example: In order to gain 200 feet per nautical mile at a ground speed of 150 knots, divide 150 by 60 and multiply by 200, which results in a climb rate of 500 feet per minute.) For those pilots who are math-challenged, both NOS and Jeppesen provide rate-to-gradient conversion charts.

TAKEOFF MINIMUMS

Part 91 of the Federal Aviation Regulations (91.175 (f) to be specific) sets forth minimums for takeoff from civil airports. Careful readers of this regulation will note that the section only applies to aircraft operated under Parts 121, 125, 129, or 135 (essentially commercial operators). The dirty little secret is that there are no takeoff minimums for Part 91 operators, making the proverbial "zero-zero" departure legal (but not necessarily smart). As with many other choices, a pilot should consider that "just because you can, doesn't mean you should."

INSTRUCTOR'S CORNER
Continued On Page 5

YANKEE AIR MUSEUM

Willow Run Airport was built by the Ford Motor Company in 1941 to serve as an airfield for their B-24 bomber plant. This was the first aircraft manufacturing plant to use Ford's automotive mass production techniques, a leading technological innovation of the time. Ford Motor Company built 8,685 B-24s from 1942 until the end of World War II. At its peak, the Willow Run plant employed over 42,000 people and produced one B-24 every 59 minutes. The last bomber to roll off the assembly line was named the "Henry Ford." When the war was over, the airport became the hub for passenger flights and air freight in the Detroit Metropolitan area.

In 1981, a group of enthusiastic people, adopting the name Yankee Air Force (YAF), shared the desire to preserve the facts and glamour of southeastern Michigan's aviation history. They began to lay plans to research, restore, and preserve the all but forgotten history of Willow Run Airport. Their initial goal was to aquire one of the original U.S. Army Air Forces hangars and restore it to its original condition. With the help of Wayne County, the owners of the airport, this first goal was accomplished and the Yankee Air Museum was born. The YAF now has four divisions. They are Saginaw Valley and Wurtsmith Divisions in Michigan, the Northeast Division in New Jersey, and the Flordia Division.

Their second goal, to obtain a B-24 built at Willow Run, has proven to be a much tougher project. Over 18,000 Liberators were built and just 11 survive today, of which only 4 were built at Willow Run. In 1987, a PB4Y-2 Privateer, the Navy's single-tailed version of the B-24, was donated to the Museum for static display.

Since 1981 the Yankee Air Force has acquired and returned to flying status five World War II aircraft. The first plane was acquired in 1981, a Douglas C-47 World War II transport which was built in 1945. The "Yankee Doodle Dandy" is the YAF's world class award-winning flagship. The B-17G "Flying Fortress" which was used in the movie "Tora!Tora!Tora!" was purchased in 1986. The "Yankee Lady" underwent extensive restoration and was returned to flying status in 1995.

The B-25D "Mitchell," a medium-duty bomber similar to the type used in Jimmy Doolittle's raid on Tokyo, was acquired in 1987. The "Yankee Warrior" saw combat in World War II and is one of only two B-25Ds still flying today. Two Taylorcraft L-2 liason aircraft are operated by divisions of the Yankee Air Force located in Saginaw, Michigan and New Jersey. These aircraft are flown and displayed at numerous airshows from May through September. They are the pride of the Yankee Air Force Museum. When visiting the hangar, you will see skilled mechanics and restoration crews actively involved in the process of bringing these national treasures back to life.

On October 9, 2004, the Yankee Air Museum at Willow Run Airport suffered a terrible fire that destroyed the historic hangar housing the museum. Through the heroic efforts of a few members, the beautifully restored B-17, C-47 and B-25 aircraft were moved out of the building before the fire reached them, thus saving the heart of the collection. In addition, all the historic aircraft on display outside of the main building were untouched by the fire. The museum did, however, lose virtually all of the tooling, equipment and spare parts for all of the aircraft plus all of the office and display fixtures and equipment totaling well over $1 million in replacement value. While thousands of irreplaceable artifacts, photos and books were also lost in the fire, the volunteers at the museum are thankful that the aircraft collection remains largely intact. Only a small number of non-flyable aircraft that were in restoration inside the hanger were lost.

The Yankee Air Museum members, staff and volunteers have already begun the recovery and rebuilding process. The aircraft, which continued their flight schedules after the fire, have been moved into a hangar loaned by Willow Run Airport. The volunteers and staff have set up an office at the airport and are fielding calls and continuing operations. It is their intention, under the leadership of Dick Stewart, President of the Yankee Air Museum, to continue the great work that was begun in 1981 by a small group of visionaries who were dedicated to preserving this important piece of aviation and Southeastern Michigan history.

The Michigan Aerospace Foundation, the sister organization of the museum which was formed to plan and fund future expansion of the museum facilities, met with the architects and Willow Run Airport management just a few days after the fire. At that time the architects were given the go ahead to begin the planning process that will lead to the construction of a new hangar and museum.

Page Photos (top to bottom) - 24s on the assembly line, in flight over Rouge Park, and on a Willow Run ramp in 1944.

AVIATION IN-FORMATION

Mary Rawlinson Creason, former Aeronautics Commissioner and Michigan Department of Transportation Employee, was inducted into the Michigan Transportation Hall of Fame earlier this year. She joined the Aeronautics Bureau, then part of the Michigan Department of State Highways, in 1977, and became the first woman pilot in state government. She earned her private pilot's license in 1943 while a student at Western Michigan University. Creason's career included owning and operating the Ottawa Air Training and Transport Service in the 1960s, managing the Grand Haven Municipal Air Park from 1974 to 1975, and serving in numerous capacities with the Michigan Department of Transportation, Bureau of Aeronautics from 1977 to 1988. Responsible for expanding aviation education in Michigan's public schools, she helped develop the "Come Fly with Me" curriculum that earned her the Federal Aviation Administration Administrator's Award for Excellence in 1987. She earned two consecutive presidential appointments to the FAA's Women's Advisory Committee on Aviation, and competed and won honors in the Air Race Classic, a 2,600-mile transcontinental race for women pilots.

The 2006 Air Race Classic was held in June 2006. This year was special because its conclusion was at the Menominee, Michigan Twin County Airport. Two teams of racers were made up of Michigan pilots. Mary Creason, former Michigan Aeronautics Commissioner, and Joyce Woods, current Aeronautics Commissioner, were the pilots of "Classic 5," a Grumman Tiger. Courtney Hedlund and Leslie Treppa are both flight instructors at Western Michigan University's College of Aviation. They completed the race in "Classic 22" one of the college's new Cirrus SR-20 airplanes.

Starting at Falcon Field, Mesa, Arizona on June 20, the racers made stops at Santa Teresa, New Mexico; Ozona and Bryan, Texas; Bastrop, Louisiana; Ada, Oklahoma; Lawrence, Kansas; Albert Lee, Minnesota before finishing in Menominee on June 23.

Thirty-five entries with seventy pilots and five pilot/passengers were entered this year. Open to women pilots only, the Air Race Classic came into being upon the demise of the All-Woman Transcontinental Air Race, pegged the "Powder Puff Derby" by Will Rogers. It is a cross-country air race for fixed-wing aircraft with normally aspirated, non-turbo-charged engines, and is flown during daylight hours under visual flight conditions. The winner is the team that averages the highest ground speed in relation to their handicap.

The Federal Aviation Administration has proposed a rule that would require special awareness training for any person who flies under visual flight rules (VFR) within 100 nautical miles of Washington, DC. The FAA studied the airspace surrounding Washington, DC, in 2003, establishing two distinct airspaces. The outer area, which closely mimics the current Washington Class B airspace, is called an Air Defense Identification Zone (ADIZ) and requires identification of all flight operations within the airspace in order to ensure the security of protected ground assets. The inner and critical security area, called a Flight Restricted Zone (FRZ) is an approximate 15-nautical mile radius around the Washington VOR, where more stringent access procedures apply. In the proposed rule, the FAA cites over 1,000 unauthorized flights within the Washington, DC Metropolitan Area ADIZ since its creation.

Two Michigan aviation pioneers passed away earlier this year. Mr. Ronald Heinlein and Dr. Jack Sanders will be remembered for their significant contributions.

Former Michigan Aeronautics Commission member, Ronald C. Heinlein, of Saginaw, died in March 2006 at the age of 81. He was appointed to the commission by Governor William Milliken Blanchard and served for 14 years, including two terms as chairman. He is survived by his wife, Jean, and two daughters.

Dr. Jack Sanders, of Alma, died in April at the age of 87. He was a pilot, flight instructor, aviation safety counselor, and FAA designated medical examiner. In addition to his many contributions to the aviation community, he was a pioneer in medical procedures for older adults. He was one of the first physicians to perform hip surgery on people over the age of 60. He was a founding board member of Northwood Institute (now Northwood University) in the late 1950s. Dr. Sanders is survived by five children.

INSTRUCTOR'S CORNER

Continued From Page 3

WHAT YOU NEED TO KNOW

When preparing for takeoff, pilots should carefully review departure procedures . If no DPs are listed, it is assumed that aircraft performance will be as described above (cross runway at 35 feet, no turns before 400 feet, and climb at 200 feet per nautical mile). Frequently, however, obstructions necessitate more complicated procedures. At some airports, obstructions or other factors require the establishment of nonstandard takeoff minimums, departure procedures, or both to assist pilots in avoiding obstacles during climb to the minimum en route altitude. Consider the example of Antrim County Bellaire, Michigan (ACB) and refer to the departure procedures in the figure below.

BELLAIRE, MI
ANTRIM COUNTY
TAKE-OFF MINIMUMS: **Rwy 2,** 700-3 or std. w/ a min. climb of 417' per NM to 1500.
DEPARTURE PROCEDURE: **Rwy 2,** climb heading 022° to 1200 before turning right. **Rwy 20,** climb heading 202° to 1300 before turning left.
NOTE: **Rwy 2,** road 385' from departure end of runway, 528' right of centerline, 15' AGL/646' MSL. Multiple trees beginning 2535' from departure end of runway, 96' left of centerline, up to 100' AGL/884' MSL. Multiple trees beginning 406' from departure end of runway, 235' right of centerline, up to 100' AGL/1147' MSL. Tower 2.57 NM from departure end of runway, 3271' right of centerline, 168' AGL/1198' MSL.
Rwy 20, multiple trees beginning 64' from departure end of runway, 204' right of centerline up to 100' AGL/693' MSL. Multiple buildings and antenna on tower beginning 2641' from departure end of runway, 909' right of centerline, up to 121' AGL/721' MSL. Multiple trees beginning 125' from departure end of runway, 220' left of centerline, up to 100' AGL/720' MSL.

TAKEOFF MINIMUMS, as mentioned above, apply only to certain operators. It specifies that there must be at least a 700 foot ceiling and 3 miles visibility or that a climb of 417 feet per nautical mile is required. Specifying weather minimums is an alternative method of maintaining clearance from obstructions when the minimum climb rate can not be achieved.

DEPARTURE PROCEDURES, apply to all operators and must be followed. Since no greater climb rate is mentioned, 200 feet per nautical mile is assumed.

The NOTE about obstacles off the ends of Runways 2 and 20 refer to what are know as "low, close-in obstacles." The rate of climb necessary to clear these obstacles would require a high climb gradient for a very short time. To eliminate the publishing of an excessive gradient, the obstacle height and distance from the departure end of the runway is noted. It is the pilot's responsibility to be aware of and avoid these obstacles.

For additional detail, pilots can refer to the FAA's excellent *Instrument Procedures Handbook.*

COMMISSION ACTION

The Michigan Aeronautics Commission met on March 30 and May 24, 2006. Action items included the approval of funding for airport improvements across the state. Some projects have federal, state, and local funding, while others are funded from state and/or local sources alone. Commission approval for federally funded projects authorizes state participation, subject to issuance of a federal grant. Federal and state dollars for airport development are primarily from restricted, user generated funds. The primary sources of revenue are aviation fuel and passenger taxes, as well as aircraft registration fees. Following are the approved projects:

March 30, 2006 Meeting

ANN ARBOR
Ann Arbor Municipal Airport
$427,500 to expand a snow removal equipment building and to construct hangar taxilanes. $406,125 state and $21,375 local.

BAD AXE
Huron County Memorial Airport
$250,000 for rehabilitation of aprons and taxilanes. $200,000 federal, $43,750 state, and $6,250 local.

BELLAIRE
Antrim County Airport
$584,000 for rehabilitation of taxiways and aprons. $322,259 federal, $242,611 state, and $19,130 local.

BENTON HARBOR
Southwest Michigan Regional Airport
$1,690,000 for Runway 9/27 rehabilitation. $1,352,000 federal, $295,750 state, and $42,250 local.

CHARLEVOIX
Charlevoix Municipal Airport
$1,140,000 for land acquisition and acquisition of snow removal equipment. $1,083,000 federal, $28,500 state, and $28,500 local.

DETROIT
Coleman A. Young Municipal Airport
$20,000 for demolition of abandoned structures. $16,000 federal, $3,500 state, and $500 local.

Detroit Metro Wayne County Airport
$12,187,500 for residential sound insulation. $9,750,000 federal and $2,437,500 local.

Detroit Metro Wayne County Airport
$19,600,000 for multiple airport improvements associated with an ongoing federal Letter of Intent. $18,581,601 federal and $1,018,399 local.

Willow Run Airport
$4,319,000 to improve the safety areas for Runways 23L and 23R, install security fencing, and to conduct a noise compatibility study. $4,103,050 federal, $107,975 state, and $107,975 local.

FLINT
Bishop International Airport
$365,000 for the design of a cargo apron. $346,750 federal, $9,125 state, and $9,125 local.

FRANKFORT
Dow Memorial Airport
$455,000 for runway safety area work, wetland mitigation, and Airport Road relocation. $364,000 federal, $79,625 state, and $11,375 local.

FREMONT
Fremont Municipal Airport
$25,000 for survey work and partial Airport Layout Plan update. $20,000 federal, $4,375 state, and $625 local.

Fremont Municipal Airport
$110,000 for installation of an Automated Weather Observation System (AWOS). $104,500 state and $5,500 local.

GRAND RAPIDS
Gerald R. Ford International Airport
$1,790,000 to rehabilitate the general aviation ramp and the first phase of design and construction of a perimeter road. $1,700,500 federal, $44,750 state, and $44,750 local.

Gerald R. Ford International Airport
$4,090,000 to reconstruct Taxiway J and perform surface restoration on Runways 8R/26L and 17/35. $3,681,000 state and $409,000 local.

GREENVILLE
Greenville Municipal Airport
$30,000 for land acquisition. $24,000 federal, $5,250 state and $750 local.

Greenville Municipal Airport
$100,000 for a feasibility study for the extension of Runway 10/28. $95,000 state and $5,000 local.

HOWELL
Livingston County-Spencer J. Hardy Airport
$700,000 for land acquisition. $560,000 federal, $122,500 state, and $17,500 local.

Livingston County-Spencer J. Hardy Airport
$2,700,000 for taxiway construction. $2,565,000 federal, $135,000 state, and $135,000 local.

IRON MOUNTAIN
Ford Airport
$822,167 for runway and taxiway lighting, an emergency generator, and terminal building expansion. $497,734 federal, $298,879 state, and $25,554 local.

LAKEVIEW
Lakeview-Griffith Airport
$236,070 for terminal building design and construction. $188,856 federal, $41,312 state, and $5,902 local.

LAPEER
Dupont-Lapeer Airport
$13,000 for a partial Airport Layout Plan Update. $10,400 federal, $2,275 state, and $325 local.

LOWELL
Lowell City Airport
$100,000 for purchase of a land parcel. $95,000 state and $5,000 local.

MANISTEE
Manistee County-Blacker Airport
$99,000 for design of improvements to the terminal building, entrance road, and parking lot. $79,200 federal, $17,325 state, and $2,475 local.

MARLETTE
Marlette Township Airport
$63,000 for an Airport Layout Plan update. $50,400 federal, $11,025 state, and $1,575 local.

Marlette Township Airport
$180,000 for snow removal equipment and building. $144,000 federal, $31,500 state, and $4,500 local.

MARSHALL
Brooks Field
$60,000 for design work for the rehabilitation of Runway 10/28. $48,000 federal, $10,500 state, and $1,500 local.

MASON
Mason Jewett Field
$876,240 for taxiway construction. $367,272 federal, $476,633 state, and $32,335 local.

MENOMINEE
Marinette Twin County Airport
$700,000 for construction of animal control fencing and pavement crack sealing. $560,000 federal, $122,500 state, and $17,500 local.

MIDLAND
Jack Barstow Airport
$660,000 to rehabilitate Runway 18/36 and parallel taxiway and to install runway lights. $528,000 federal, $115,500 state, and $16,500 local.

MT. PLEASANT
Mt. Pleasant Municipal Airport
$187,500 for design work for apron expansion and taxistreet extension. $150,000 federal, $32,813 state, and $4,688 local.

MUSKEGON
Muskegon County Airport
$6,070,000 for Runway 14/32 Runway Safety Area improvements. $5,766,500 federal, $151,750 state, and $151,750 local.

NEWBERRY
Luce County Airport
$265,092 for the second phase of perimeter fence construction. $212,074 federal, $46,391 state, and $6,627 local.

ONTONAGON
Ontonagon County Airport-Schuster Field
$160,000 for runway and taxiway light rehabilitation, visibility indicator markers, crack sealing, and a Runway 34 turnout and erosion pad. $128,000 federal, $28,000 state, and $4,000 local.

OWOSSO
Owosso Community Airport
$178,000 for installation of taxiway lighting. $169,100 state and $8,900 local.

PELLSTON
Pellston Regional Airport
$1,671,053 for purchase of a snow blower, construction of an access road, supplemental wind indicators, and pavement marking. $1,587,500 federal, $41,776 state, and $41,777 local.

PONTIAC
Oakland Pontiac International Airport
$69,000 for an environmental assessment. $55,200 federal, $12,075 state, and $1,725 local.

Oakland Pontiac International Airport
$2,275,132 for a North/South runway relocation including connecting taxiways, Runway 9R extension, perimeter road construction, fence construction, hangar removal, and Runway Safety Area improvements. $1,820,106 federal, $398,148 state, and $56,878 local.

Oakland Pontiac International Airport
$135,000 for purchase of snow removal equipment and pavement friction testing equipment. $128,250 state and $6,750 local.

ROMEO
Romeo State Airport
$492,500 for construction of an entrance road and site preparation for a new terminal building. $394,000 federal, $86,187 state, and $12,313 local.

SAGINAW
MBS International Airport
$500,000 for planning for a new terminal building. $475,000 federal, $12,500 state, and $12,500 local.

Saginaw County H.W. Browne Airport
$25,000 for pavement marking. $20,000 federal, $4,375 state, and $625 local.

SAULT STE. MARIE
Chippewa County International Airport
$1,950,000 for Runway 16/34 joint rehabilitation, pavement marking, refurbish taxiway lighting, install supplemental wind indicators, and purchase of a snow removal vehicle. $1,852,500 federal, $48,750 state, and $48,750 local.

Sault Ste. Marie Municipal-Sanderson Airport
$360,000 for snow removal equipment and building. $342,000 state and $18,000 local.

SOUTH HAVEN
South Haven Area Regional Airport
$106,000 for fees associated with purchase of a land parcel. $84,800 federal, $18,550 state, and $2,650 local.

SPARTA
Paul C. Miller-Sparta Airport
$800,000 for land acquisition. $760,000 state and $40,000 local.

STATEWIDE
Various Airports
$480,000 for pavement marking and crack sealing.

TROY
Oakland/Troy Airport
$42,000 for a stand-by airport lighting power system. $39,000 state and $2,100 local.

May 24, 2006 Meeting

ADRIAN
Lenawee County Airport
$250,000 for fence construction. $237,500 state and $12,500 local.

ALPENA
Alpena County Regional Airport
$200,000 for replacement of airfield signs. $190,000 federal, $5,000 state, and $5,000 local.

BARAGA
Baraga Airport
$58,000 for the second phase of an environmental assessment. $55,100 state and $2,900 local.

BATTLE CREEK
W. K. Kellogg Airport
$881,563 design work for a new parallel runway and taxiway, road relocation, and snow removal equipment building. $705,250 federal, $154,274 state, and $22,039 local.

W. K. Kellogg Airport
$255,000 for construction of perimeter fencing. $168,000 federal, $36,750 state, and $50,250 local.

BAY CITY
James Clements Airport
$350,000 for installation of runway lighting. $332,500 state and $17,500 local.

CARO
Tuscola Area Airport
$587,627 for taxiway rehabilitation and extension. $470,102 federal, $102,835 state, and $14,690 local.

CHEBOYGAN
Cheboygan County Airport
$55,000 for land acquisition. $44,000 federal, 9,625 state, and $1,375 local.

COLDWATER
Branch County Memorial Airport
$956,200 for taxiway rehabilitation and extension. $299,014 federal, $618,719 state, and $38,467 local.

DETROIT
Grosse Ile Municipal Airport
$125,000 for the purchase of an easement on Round Island. $100,000 federal, $21,875 state, and $3,125 local.

DRUMMOND ISLAND
Drummond Island Airport
$39,000 for design work for the rehabilitation of Runway 8/26, connector taxiway, and apron. $37,050 state and $1,950 local.

EAST TAWAS
Iosco County Airport
$150,000 for purchase of snow removal equipment. $142,500 state and $7,500 local.

GLADWIN
Gladwin Zettel Memorial Airport
$510,000 for hangar construction and site work. $408,000 federal, $89,250 state, and $12,750 local.

COMMISSION ACTION

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COMMISSION ACTION Continued From Previous Page

GREENVILLE
Greenville Municipal Airport
$170,000 for hangar site construction. $136,000 federal, $29,750 state, and $4,250 local.

HARBOR SPRINGS
Harbor Springs Municipal Airport
$90,000 for design work for a new terminal building. $85,500 state and $4,500 local.

HART/SHELBY
Oceana County Airport
$70,000 for land acquisition consultant costs. $66,500 state and $3,500 local.

HILLSDALE
Hillsdale Municipal Airport
$60,000 for a tree obstruction survey. $48,000 federal, $10,500 state, and $1,500 local.

IRON MOUNTAIN
Ford Airport
$92,000 for a wildlife study and supplemental funding for terminal building expansion. $87,400 state and $4,600 local.

KALAMAZOO
Kalamazoo/Battle Creek International Airport
$216,000 for relocation of Taxiway B. $194,400 state and $21,600 local.

MANISTEE
Manistee County-Blacker Airport
$2,187,500 for purchase of an airport rescue firefighting vehicle and for land acquisition. $1,750,000 federal, $382,812 state, and $54,688 local.

MIO
Oscoda County Airport
$40,000 for an environmental assessment for a new paved runway. $38,000 state and $2,000 local.

PONTIAC
Oakland County International Airport
$3,750,000 for the 2006 noise mitigation/residential sound insulation program. $3,000,000 federal, $656,250 state, and $93,750 local.

PORT HURON
St. Clair International Airport
$344,000 for the rehabilitation of Taxiway C. $275,200 federal, $60,200 state, and $8,600 local.

STATEWIDE
Various Airports
$40,000 in state funds for environmental permits pursuant to an agreement with the Michigan Department of Environmental Quality.

WHITE CLOUD
White Cloud Airport
$193,975 for land acquisition closing costs for runway approach protection. $155,180 federal, $33,945 state, and $4,850 local.

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